

Because the change of the exit angle **[on the basis of the fluctuation of the wavelength is very large, for example] is more sensitively dependent upon wavelength**, compared with that in a background-art diffraction grating or the like, the size of the apparatus can be reduced as a whole. In addition, because such a periodic multilayer structure is

5 generally formed on a substrate, the periodic multilayer structure is suitable for integration of the beam source and the beam detecting means on one and the same substrate. Hence, optical parts such **as** a lens, and so on, are not required, so that a wavelength monitoring apparatus small in size and excellent in stability can be provided.

10 Please amend the following paragraph beginning at page 7, line 12 as follows:

In most cases, **[use of such]** an optical multilayer film is **[generally conceived upon the assumption of beam rays which pass] used by passing beam rays** through the uppermost layer surface to the lowermost layer surface of the multilayer film **[provided on a surface of the substrate]**. **[There is none but the following example as**

15 **an example in which] The present invention is different in that** an end surface of the multilayer film, **[that is,]** (a surface where the periodic structure is exposed), is used as a beam incidence surface or as a beam exit surface.

Please amend the following paragraph beginning at page 8, line 20 as follows:

20 According to the inventors' experiment, when laser beam (incident beam) 3 with a wavelength λ is **[made]** incident on an end surface 1a of the multilayer film 1 after the end surface 1a is polished, a large part of beam serves as guided beam 4 **[in the]** inside **[of]** the multilayer film 1. A part of **guided** beam **4**, however, **[serves as] becomes** beam 5 leaked to the substrate 2 side. **[The direction (angle θ) of the leaked beam 5 is**

25 **approximately constant with respect to the wavelength λ , so that the leaked beam 5 forms luminous flux with very good directivity.]** Moreover, because the value of θ varies **[largely in accordance] greatly** with the value of λ , the multilayer film 1 can detect the change of the wavelength of the incident beam 3 as a change of the angle θ with high sensitivity.

30 **In the Claims:**